

DF6A6.8FUT1

Quad Array for ESD Protection

This quad voltage suppressor is designed for applications requiring transient overvoltage protection capability. It is intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment, and other applications. Its quad junction common anode design protects four separate lines using only one package. These devices are ideal for situations where board space is at a premium.

Specification Features

- SC-88 Package Allows Four Separate Unidirectional Configurations
- Low Leakage < 1 μ A @ 5 Volt
- Breakdown Voltage: 6.4 – 7.2 Volt @ 5 mA
- Low Capacitance (40 pF typical)
- ESD Protection Meeting 61000-4-2 Level 4 and 16 kV Human Body Model

Mechanical Characteristics

- Void Free, Transfer-Molded, Thermosetting Plastic Case
- Corrosion Resistant Finish, Easily Solderable
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

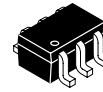
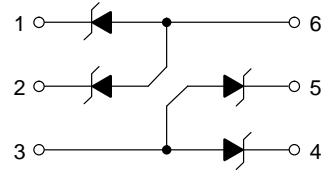
Rating	Symbol	Value	Unit
Peak Power Dissipation @ 8 x 20 μ s (Note 1)	P_{pk}	75	Watts
Steady State Power Dissipation (Note 2)	P_D	385	mW
Thermal Resistance – Junction to Ambient Derate Above 25°C	$R_{\theta JA}$	328 3.0	$^\circ\text{C/W}$ $\text{mW}/^\circ\text{C}$
Maximum Junction Temperature	T_{Jmax}	150	$^\circ\text{C}$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
ESD Discharge MIL STD 883C – Method 3015-6 IEC61000-4-2, Air Discharge IEC61000-4-2, Contact Discharge	V_{PP}	16 16 8	kV
Lead Solder Temperature (10 seconds duration)	T_L	260	$^\circ\text{C}$

1. Per Waveform Figure 1
2. Mounted on FR-5 Board = 1.0 X 0.75 X 0.062 in.



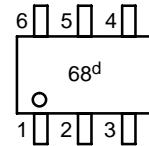
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SC-88
CASE 419B
PLASTIC

MARKING DIAGRAM

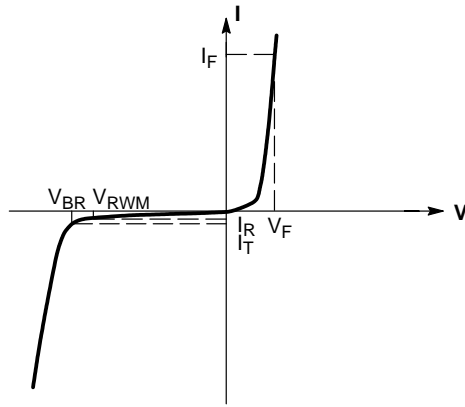


68 = Device Marking
d = One Digit Date Code
O = Pin 1 Indicator

ORDERING INFORMATION

Device	Package	Shipping
DF6A6.8FUT1	SC-88	3000/Tape & Reel

DF6A6.8FUT1



V-I Curve

ELECTRICAL CHARACTERISTICS

Device	Device Marking	Breakdown Voltage V_{BR} @ 5 mA (Volts)			Leakage Current I_{RM} @ $V_{RWM} = 5$ V	Typical Capacitance @ 0 V Bias	Max V_F @ $I_F = 10$ mA	Max Z_Z @ 5 mA	Max Z_{ZK} @ 0.5 mA
		Min	Nom	Max	(μ A)	(pF)	(V)	(Ω)	(Ω)
DF6A6.8FUT1	68	6.4	6.8	7.2	1.0	40	1.25	30	300

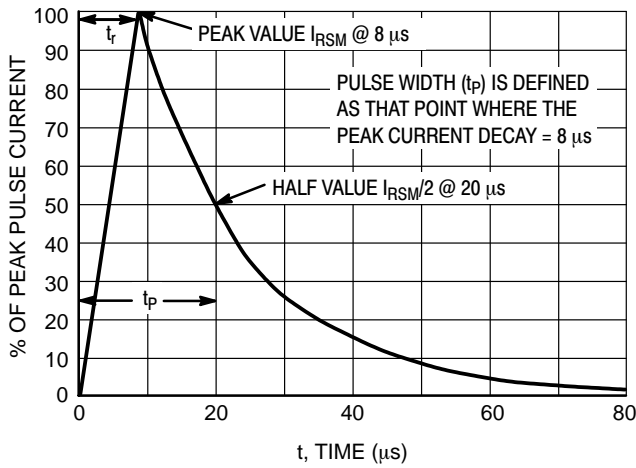


Figure 1. $8 \times 20 \mu s$ Pulse Waveform

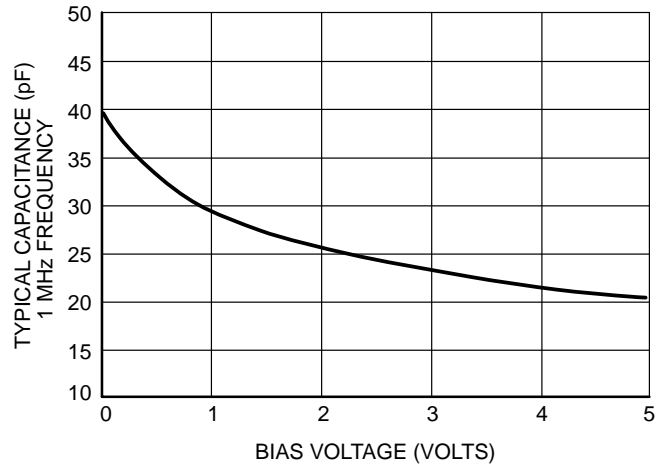


Figure 2. Capacitance

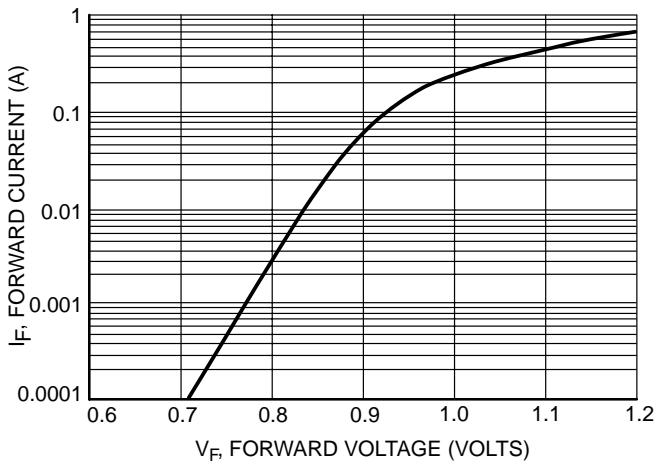


Figure 3. Forward Voltage

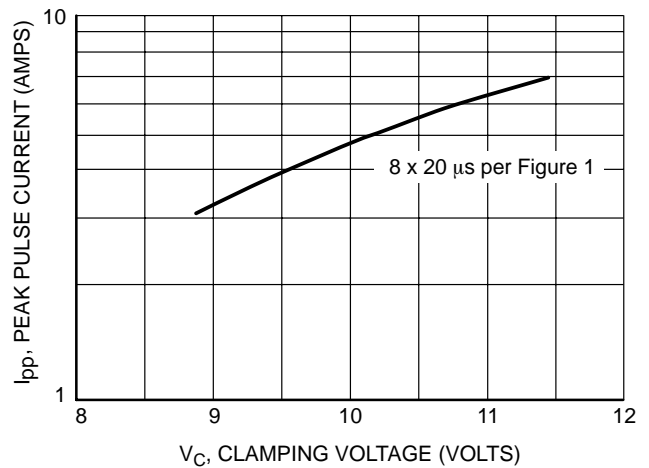
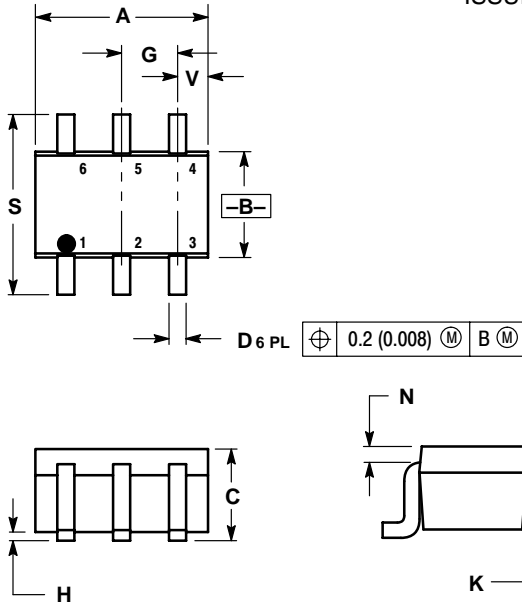


Figure 4. Clamping Voltage versus Peak Pulse Current

DF6A6.8FUT1

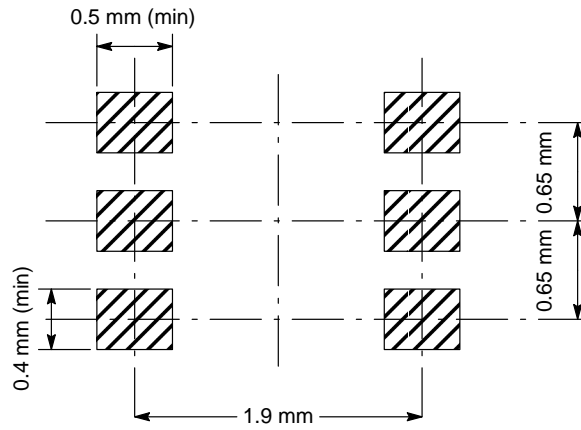
PACKAGE DIMENSIONS

SC-88 (SOT-363)
CASE 419B-01
ISSUE G



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20
V	0.012	0.016	0.30	0.40



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